REMARKS

This paper is being provided in response to the Office Action dated February 9, 2005 for the above-referenced application. In this response, Applicants have made minor clarifying modifications to the specification, cancelled claims 64, 65, 81, and 82, and amend claims 63, 66, 80, and 83 in order to clarify that which Applicants deem to be the invention. Applicants respectfully submit that the changes to the specification do not add new matter and that the amendments to the claims are all supported by the originally filed application.

The objection to the drawings has been addressed by amendments to the specification provided herein where the reference number 130 is added in accordance with the guidelines set forth in the Office Action. Accordingly, Applicants respectfully request that this objection be withdrawn.

The rejection of claims 63-96 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,324,654 to Wahl et al. (hereinafter "Wahl") is hereby traversed and reconsideration thereof is respectfully requested in view of amendments to the claims provided herein.

Claims 63, as amended herein, recites a method for performing data recovery in a computer system that includes sending data from a first storage device to at least one other secondary storage device, the data being sent in a plurality of data packets, each of the plurality of packets being associated with a sequence number having a first predetermined value, upon determining that the data has been successfully stored on all of the at least one other storage

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device, deleting journal entries in a sender corresponding to the data and, upon determining a failure in connection with synchronizing data between a first storage device and at least one other secondary storage device, deleting journal entries in each of the at least one other secondary storage device, and resending unsynchronized journal entries from the sender by sending a plurality of data packets all having a same sequence number lower than sequence numbers associated with other unsent packets and then sending any remaining data packets having a next higher sequence number, where data packets having the same sequence number are sent in an order that is independent of an order in which the data packets were created. Claims 64 and 65 have been cancelled herein. Claims 66-79 depend, directly or indirectly, from claim 63.

Claim 80, as amended herein, recites a computer program product for performing data recovery in a computer system that includes machine executable code that sends data from a first storage device to at least one other secondary storage device, the data being sent in a plurality of data packets, each of the plurality of packets being associated with a sequence number having a first predetermined value, machine executable code that, upon determining that the data has been successfully stored on all of the at least one other storage device, deletes journal entries in a sender corresponding to the data, and machine executable code that, upon determining a failure in connection with synchronizing data between a first storage device and at least one other secondary storage device, deletes journal entries in each of the at least one other secondary storage device, and resends unsynchronized journal entries from the sender by sending a plurality of data packets all having a same sequence number lower than sequence numbers associated with other unsent packets and then sending any remaining data packets having a next higher sequence

number, where data packets having the same sequence number are sent in an order that is independent of an order in which the data packets were created. Claims 81 and 82 have been cancelled herein. Claims 83-96 depend, directly or indirectly,. From claim 80.

Wahl discloses a computer network remote data mirroring system that writes update data both to a local data device (16) and to a local, chronologically sequenced journal storage area (18). If the local computer system crashes, upon recovery or re-boot of the local computer system, the two most current updates from the journal storage area (18) device are written to the local data device (16) to assure that the data stored on the local data device is current. Figure 2 shows that the journal storage area (18) may be organized as a circular queue. Column 7, lines 18-22 disclose that each entry written to the journal storage area (18) consists of data and a header where the header contains information, such as a timestamp, sequence number, device offset, and size of the transaction that is used by other system components. Column 9, lines 32-37 of Wahl disclose that the header contains, *inter alia*, a global sequence number (unique between all journal devices) and a local sequence number (unique within a current journal device) and that the sequence numbers are used to ensure that the order of the data entries in the journal storage area (18) exactly follows the sequence in which they are generated.

Applicants respectfully submit that Wahl does not show, teach, or suggest features of the present claimed invention where data packets having a same sequence number are sent in an order that is independent of an order in which the data packets were created. This feature is described in the present application and illustrated, for example, by Figure 8 and the corresponding description on page 20 of the specification. Data packets from two independent

chains may be assigned the same sequence number and written to the secondary storage device in any order. Thus, for recovery operations (e.g., the step 306 of Figure 16), the data corresponding to the same sequence number may be provided in an order that is independent of an order in which the data packets were created, as recited in Applicant's independent claims.
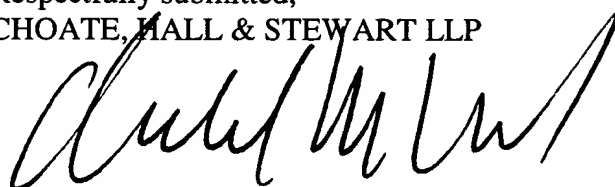
In contrast, Wahl specifically discloses a scheme whereby each journal entry (data packet) is assigned a unique number and recovery of data is performed by writing the data in an order corresponding exactly to the sequence number. Wahl does not show, teach, or suggest the feature of the present claimed invention whereby data recovery may be performed independent of the order the journal entries (data packets) were created. Accordingly, Applicants respectfully request that this rejection be withdrawn.

Based on the above, applicant respectfully requests that the Examiner reconsider and withdraw all outstanding rejections and objections. Favorable consideration and allowance are earnestly solicited. Should there be any questions after reviewing this paper, the Examiner is invited to contact the undersigned at 617-248-4038.

Respectfully submitted,
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